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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/637,407

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Masaki Aoshima

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11/14/2006

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVE  
SUITE 5400  
SEATTLE, WA 98104

EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT

PAPER NUMBER

1756

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/637,407

Applicant(s)

AOSHIMA ET AL.

Examiner

Martin J. Angebrannt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/15/06 & 6/5/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-8 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-8 and 13-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/15/06 &amp; 6/5/06</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. The response of the applicant has been read and given careful consideration. The applicant indicates that a certified translation of the priority document accompanies the response. There is what appears to be a copy of the specification, but there is no certified translation of the priority document with the appropriate statements from the translator. Therefore the applicant is not accorded the priority date. Rejections of the previous office action, not repeated below are withdrawn based upon the arguments and amendments of the claims.

The applicant filed an IDS on 6/5/06 and 8/15/06 and these total approximately 100 references. It is unclear why these were cited because they do not appear to be "material to patentability" of the claimed invention (37 CFR 1.56).

MPEP 2004, particularly paragraph (13), sets forth guidelines to aid applicants in their duty of disclosure. In this section it is stated "It is desirable to avoid submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant or marginally pertinent cumulative information. If a long list is submitted, highlight those documents, which have been specifically brought to the applicant's attention and/or are known to be of most significance. See Penn Yan Boats, Inc., v. Sea Lark Boats, Inc., 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), *aff'd*, 479 2d 1388, 178 USPQ 577 (5th Cir. 1973), *cert. denied* 414 U.S. 874 (1974)."

In an effort to clarify the "material" nature of these references to the patentability of the instant claims, applicants are requested to specify why each of the above referred to references were cited. (Note Applicants' PTOL-1449).

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claims 5-8 and 13-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 should indicate that the first dielectric is between the light transmission layer and both of the first and second recording layers.

Claim 5 should indicate that the second dielectric is between the substrate and both of the first and second recording layers.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-8 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inuoe et al. '080 or Inuoe et al. '825.

Inuoe et al. '080 and Inuoe et al. '825 teach in example 4 an optical recording medium which has a reflective layer, a dielectric layer, a Cu based layer, a Si layer another dielectirc

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layer and are recorded upon and read using with a 405 nm laser and an NA of 0.85 [0134-0153]. The use of other materials as the reflective layer materials including Sn is disclosed [0027]. The use of other materials for the first recording layer , including Sn and Ge is disclosed. [0014].

It would have been obvious to one skilled in the art to modify the example by replacing the Cu with Sn or Ge with a reasonable expectation of forming a useful optical recording medium based upon the equivalence.

The applicant asserts that a certified translation obviates this rejection. The examiner agrees that this would be the case were that translation to be present in the record, but this is not the case, so the rejection stands.

7. Claims 5,6,13,14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. JP 62-204442.

An English language translation of this abstract is provided. Examiner requests that if the Applicants have a translation made of this reference that such be provided with Applicant's response.

Kobayashi et al. JP 62-204442 teaches an optical recording media comprising a recording layer consisting of at least two kinds of phase-change films having different composition wherein the first recording layer is of Si ,Te, or the like and the second recording material is Au, Ag, Ge or the like. When the materials are recorded, the recording layers are alloyed. Recording layers (41, 42) are provided between dielectric layers (3, 5) wherein a protective layer (6) is opposite the substrate (2). With regard to the Applicants' capabilities of properties under specific irradiation, it is the Examiner's assertion is that the same compounds will react the same way (or similarly) under the same circumstances and thus the materials of Kobayashi anticipate

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these irradiations. While these properties are not specified in the English language abstract, it is further the Examiner's assertion that it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the materials under near-field conditions, thereby satisfying these requirements. Examiner notes that with regard to claims 9-10 the additional dielectric layer furthest from the substrate acts as a "protective layer" as the dielectric layer can act as a barrier from damage from oxygen, mechanical contact and the like (further teaching found in example 4). The bilayer is 100 nm thick, the lower and upper dielectric layers are silicon dioxide and 100 nm thick. (example 4).

It would have been obvious to one skilled in the art to modify the examples of Kobayashi et al. JP 62-204442 by using Ge and Si as the recording bilayer with a reasonable expectation of success based upon the disclosure of equivalence.

8. Claims 5-8,13-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. JP 62-204442, as applied above, in view of Kinoshita et al. JP 2000-285509 (machine translation provided) and Morimoto et al. '345

Kinoshita et al. JP 2000-285509 teach a alloying recording medium comprising a substrate, a partially reflective layer (2), a dielectric layer (3), a recording bilayer (104,105), a second dielectric layer (5). The first recording layer can be Sn or the like [005]. The second recording layer is Ge [0015].

Morimoto et al. '345 teaches that the reflective layer may be on the same side of the recording film as the substrate if topside recording is to be used and on the opposite side of the recording films from the substrate if the recording is to take place through the substrate (6:42-65). The dielectric layers are disclosed as providing improvements in the stability and sensitivity

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of the overall device (7:42-8:12). The prevention of direct contact with the recording layer is further disclosed (7:1-10). The thickness of the dielectric layers may be 10 to 500 nm (7/51-8/12).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the medium rendered obvious by Kobayashi et al. JP 62-204442 by adding a reflective layer as taught by Kinoshita et al. JP 2000-285509 (machine translation provided) and Morimoto et al. '345 to allow reflective readout of the medium. Further it would have been obvious to use Sn in place of Si, to form a Sn/Ge bilayer as taught by Kinoshita et al. JP 2000-285509.

9. Claims 5-8,13-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. JP 62-204442, in view of Kinoshita et al. JP 2000-285509 (machine translation provided) and Morimoto et al. '345, further in view of Okawa et al. JP 62-028941 or Fukano et al. '073.

Okawa et al. JP 62-028941 in the examples describes an optical recording medium which is a Ge-C layer overlaid with a Te-C layer and these mix as shown in figures 2-4. The examiner does not have a translation of this reference. If the applicant has one made, the examiner would appreciate a copy with the next response. The examiner holds that Ge is a primary component in the first layer and C is a primary component in the second.

Fukano et al. '860 teach the use of carbon barrier layers between alloying/reaction recording bilayers (2/30-40, 3/5-20).

In addition to the basis above, it would have been obvious to one skilled in the art to modify the media resulting from the combination of Kobayashi et al. JP 62-204442 with Kinoshita et al. JP 2000-285509 and Morimoto et al. '345 by using carbon containing layers as

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taught by Okawa et al. JP 62-028941 or by adding a carbon interlayer as taught by Fukano et al.

'860 with a reasonable expectation of forming a useful alloying optical recording medium.

10. Claims 5-8 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. JP 62-204442, in view of Morimoto et al., '345, further in view of Mizushima et al. WO 03/025924 [US 2004/0174796 is the English equivalent].

Mizushima et al. WO 03/025924 teaches the use of a blue laser having a wavelength of 200-450 nm for alloying recording (3/6-12 and 5/2-8, [0014 and 0025].

In addition to the basis above, it would have been obvious to modify the process resulting from the combination of Kobayashi et al. JP 62-204442 with Kinoshita et al. JP 2000-285509 and Morimoto et al. '345 by using shorter wavelengths known to be useful in alloying recording processes, such as the 350-450 range taught by Mizushima et al. WO 03/025924.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).



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12. Claims 5-8 and 13-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/268109 (US 2006/0078825). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments where Si is present in one of the recording layers and either Sn, C or Ge are the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The applicant states that a terminal disclaimer may be filed should one of these become allowable. This provisional rejections are maintained.

13. Claims 5-8 and 13-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/608814 (US 2004/0038080). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments-where Si is present in one of the recording layers and either Sn, C or Ge are the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 5-8 and 13-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/818324 (US 2004/0202097). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the

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embodiments where Si is present in one of the recording layers and either Sn, C or Ge are the primary components of the other recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

15. Claims 5-8 and 13-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/748979 (US 2004/0152016). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications including the embodiments where Si, Ge or Sn are present in one of the recording layers and C is the primary components of the other recording layer.

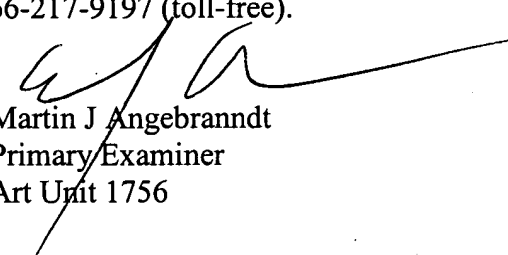
This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebrannt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebranndt  
Primary Examiner  
Art Unit 1756

11/2/06  
05/12/2006